

Remarks

Claims 1, 3-5 and 8-10 are pending in the application, with claim 1 being the independent claim. Claims 2, 6 and 7 were cancelled. Claims 3-5 and 8 are withdrawn from consideration by the Examiner.

Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

I. Rejoinder

Upon allowance of elected composition claims (claims 1, 9 and 10) in Group I, Applicants respectfully request rejoinder of method claims (claims 3 and 4) in Group II and process of making claim (claim 8) in Group IV to the elected invention.

II. Rejection under 35 U.S.C. § 112, First Paragraph

Claims 1, 9 and 10 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly for failing to comply with the written description requirement. The Examiner asserts that "[t]he limitation of 'consisting essentially of' was not disclosed in the specification as originally filed or the claims and is therefore 'new matter'." (Office Action, page 3.) Applicants respectfully traverse the rejection.

Present claims 1, 9 and 10 contain the transitional phrase "consists essentially of," which "limits the scope of a claim to the specified materials or steps 'and those that do not *materially* affect the *basic* and *novel* characteristic(s)' of the claimed invention."

(MPEP 2111.03, citing *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976)) (emphasis in original). Thus, each of present claims 1, 9 and 10 is directed to a synergistic fungicidal composition contains fluoxastrobin, prothioconazole and tebuconazole as well as additional ingredients, for example extenders and/or surfactants, which do not materially affect the synergistic fungicidal properties of the claimed compositions.

When a specification describes a claimed invention in a manner that conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as now claimed, the written description requirement is satisfied. (See MPEP 2163.02, citing *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991)). "Possession may be shown in a variety of ways including description of an actual reduction to practice." "The subject matter of the claim need not be described literally (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement." (MPEP 2163.02). "To comply with the written description requirement. . . , each claim limitation must be expressly, implicitly, or inherently supported in the originally filed disclosure." (MPEP 2163).

Even though the specification or the claims as originally filed did not use the phrase "consisting essentially of" literally in describing the claimed invention, one of ordinary skill in the art would reasonably conclude that Applicants were in possession of the invention as now claimed at the time of filing at least because Applicants described an exemplary composition containing three active compounds fluoxastrobin, prothioconazole and tebuconazole. The exemplary composition also contains N,N-

dimethylacetamide (solvent) and alkylaryl polyglycol ether (emulsifier), which do not materially affect the synergistic fungicidal properties of the composition. (*See* specification, Example at pages 8 and 9.) As such, possession is shown by description of an actual reduction to practice of the claimed invention. Thus the transitional phrase "consists essentially of" recited in present claims 1, 9 and 10 is at least implicitly or inherently supported in the originally filed disclosure.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection.

III. Rejection under 35 U.S.C. § 112, Second Paragraph

Claims 1, 9 and 10 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner asserted that

The phrase "consisting essentially of" fails to contemplate the exclusion of any particular ingredients as implied therein and does not provide any criteria for determining if a given ingredient "materially affects the basic or novel characteristics of the invention". Therefore the phrase renders the claim indefinite.

(Office Action, pages 3 and 4.) Applicants respectfully traverse this rejection.

"In reviewing a claim for compliance with 35 U.S.C. 112, second paragraph, the examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope" (*See* MPEP § 2173.02.) "Only when a claim remains insolubly ambiguous without a discernible meaning after all reasonable attempts at construction must a court declare it indefinite." *Metabolite Labs., Inc., v.*

Lab. Corp. of Am. Holdings, 370 F.3d 1354, 1366, 71 USPQ2d 1081, 1089 (Fed. Cir. 2004).

Present claims 1, 9 and 10 clearly apprise one of ordinary skill in the art of its scope, because one of ordinary skill in the art would know that the claim language, *i.e.*, "consisting essentially of," defines the claimed synergistic fungicidal composition to exclude a further active compound. In addition, at the time the present application was filed, one of ordinary skill in the art would know whether a given ingredient in a fungicidal composition is an active compound or a formulation aid, *e.g.*, extenders or surfactants. Therefore, present claims 1, 9 and 10 are clear and definite.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection.

III. Rejection under 35 U.S.C. § 103(a)

Claims 1, 9 and 10 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Dutzmann *et al.* (US Patent No. 6,306,850) ("Dutzmann"). Applicants respectfully traverse this rejection.

A. Prima Facie Case of Obviousness Has Not Been Established

Applicants reiterate that for the reasons detailed in Applicants' Amendment and Reply of June 3, 2009, claims 1, 9 and 10 are not *prima facie* obviousness Dutzmann.

In sum, Dutzmann generally discloses a fungicidal composition comprising prothioconazole and one or more active compounds selected from 24 groups of listed active compounds, including tebuconazole and fluoxastrobin. Dutzmann does not

disclose a specific three-compound composition containing fluoxastrobin, prothioconazole and tebuconazole, which possesses a synergistic fungicidal effect. As the Examiner acknowledged in the Office Action mailed on March 3, 2009, "the reference [Dutzmann] does not provide any motivation to select the specific combination of the active compounds of formulas (I), (III) and (XIV)."¹ (Office Action, mailed on March 3, 2009 at page 4).

In addition, in Applicants' Amendment and Reply of June 3, 2009, Applicants amended claim 1 to recite specific ratios of fluoxastrobin to prothioconazole and fluoxastrobin to tebuconazole in the claimed compositions. Applicants reiterate that for the reasons detailed in Applicants' Amendment and Reply of June 3, 2009, Dutzmann is silent regarding the ratio of fluoxastrobin to tebuconazole as required by each of present claims 1, 9 and 10.

Dutzmann discloses the ratio of *prothioconazole* to *fluoxastrobin* being from 1:0.1 to 1:50 (*see* Dutzmann, col. 12, line 22), or *fluoxastrobin* to *prothioconazole* being "from 0.1:1 to 50:1" as characterized by the Examiner. (Office Action, page 5.) Dutzmann also discloses the ratio of *prothioconazole* to *tebuconazole* being from 1:0.1 to 1:20 (*see* Dutzmann, col. 11, line 63.) Dutzmann does not disclose the ratio of *fluoxastrobin* to *tebuconazole*. However, the Examiner has asserted that Dutzmann discloses the ratio of fluoxastrobin to tebuconazole being "from 0.1:0.1 to 50:20" (*see* Office Action, pages 4 and 5), which appears to be derived from Dutzmann's disclosure of *prothioconazole* to *fluoxastrobin* from 1:0.1 to 1:50, and *prothioconazole* to

¹ Dutzmann's active compounds of formulas (I), (III) and (XIV) correspond to Applicants' active compounds of formulas (II), (III) and (I).

tebuconazole from 1:0.1 to 1:20. The Examiner's conclusion is not supported by Dutzmann. As discussed *supra*, Dutzmann generally discloses a fungicidal composition comprising prothioconazole as the principle fungicide, with one or more active compounds mixing partners, including fluoxastrobin and tebuconazole. Thus, Dutzmann discloses the mixing ratio of prothioconazole to its mixing partners, *e.g.*, prothioconazole to fluoxastrobin, and prothioconazole to tebuconazole. The ratio of fluoxastrobin to tebuconazole, the two mixing partners of prothioconazole, is not the subject matter of Dutzmann. A person of ordinary skill in the art would not have read Dutzmann as disclosing the ratio of fluoxastrobin to tebuconazole as asserted by the Examiner.

In summary, Dutzmann does not disclose a synergistic ternary composition consisting essentially of fluoxastrobin, prothioconazole and tebuconazole, which requires the specific ratios of fluoxastrobin to tebuconazole as recited in claims 1, 9 and 10 of the present application. Accordingly, Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness.

B. Synergistic Effect

Applicants reiterate that for the reasons detailed in Applicants' Amendment and Reply of June 3, 2009, even assuming that a *prima facie* case of obviousness was established, the synergistic effect exhibited by the claimed combination is sufficient to overcome a *prima facie* case.

With respect to the Declaration, the Examiner asserted:

The Examiner submits the alleged unexpected results do not appear to be supported. The *Leptosphaeria nodorum* test of Dutzmann gave a 100% efficacy with the use of the instant

formulation (II) alone (column 43), therefore unexpected results is not supported. In regard to the results of *Fusarium graminearum* test, the results appear to be no more than additive effect and therefore would be expected.

(Office Action, pages 2-3.) Applicants respectfully disagree.

Table 7 of Dutzmann (column 43) discloses *Leptosphaeria nodorum* test of prothioconazole (the instant formulation (II)), when used alone, gave 62% efficacy, not 100% efficacy as alleged by the examiner. Applicants note that there are two typographic/translation errors with respect to the two active compounds of the combination and their mixing ratio as described in Table 7 of Dutzmann. Dutzmann is a U.S. National Phase of International Application No. PCT/EP98/01986. A copy of PCT/EP98/01986 as published (WO 98/47367) is attached as Exhibit A. As shown on page 49, third row of Table 7 of PCT/EP98/01986, the combination is active compounds (I)+(XIV), with a mixing a ratio of 1:3. The combination is *erroneously* recited as active compounds "(I) +(I)," with a mixing ratio of "1:1" in Dutzmann.

In addition, as discussed previously, the Declaration demonstrated that the claimed composition has an enhanced synergistic against *Leptosphaeria nodorum* on wheat plants according to Colby formula. The Declaration also demonstrated the claimed composition has an enhanced synergistic effect against *Leptosphaeria nodorum* on wheat plants, as compared to at least some of the Dutzmann combinations. Furthermore, as discussed previously, the Declaration demonstrated that the claimed composition has an enhanced synergistic effect against *Fusarium graminearum* on barley plants according to Colby formula. The Declaration also demonstrated the claimed composition has an enhanced synergistic effect against *Fusarium graminearum* on barley

plants, as compared to at least some of the Dutzmann combinations. Accordingly, the claimed composition is not obvious over Dutzmann.

With respect to the synergistic results presented in the specification, the Examiner asserted:

In regard to Applicant's synergistic effects, it appears the results are no more than additive. Specifically, comparing the results of the Table on page 9 of the instant specification to that of Dutzmann, the results for Dutzmann of the combination of claimed formula (II) and (III) resulted in an efficacy of 100% at the ratio of 1:1 and 1:3, therefore adding a third composition could not give anymore than the 100% received, therefore there is no support for synergism.

(Office Action, page 5.) Applicants respectfully disagree.

Applicants note, when comparing the fungicidal effects of presently claimed compositions with that of Dutzmann, the test conditions must be taken into consideration in order to make any meaning comparison.

Example 7 of Dutzmann describes *Leptosphaeria nodorum* test wherein the inoculated wheat plants are placed in a greenhouse at a temperature of about *15 °C* and the evaluation is carried out *10 days* after the inoculation. In contrast, the Example and Table on pages 8 and 9 of the instant specification describes *Erysiphe graminis f. sp. tritici* test wherein the inoculated wheat plants are placed in a greenhouse at a temperature of about *20 °C* and the evaluation is carried out *8 days* after the inoculation. Thus, the Example 7 of Dutzmann is not only directed to a different fungus, but also is carried out at a different inoculation temperature in the greenhouse, as compared to the Example of the instant specification. A person of ordinary skill in the art would know that higher greenhouse temperature that is used in the instant specification promotes the

development of heavier fungal infection. Hence, the 100% efficacy of the present composition is not directly comparable to the 100% efficacy of Dutzmann.

Example 5 of Dutzmann describes *Erysiphe graminis* f. sp. *tritici* test wherein the inoculated wheat plants are placed in a greenhouse at about 20 °C and the evaluation is carried out 7 *days* after the inoculation. At the mixing ratio of 1:1 and 3:1 (prothioconazole (I): fluoxastrobin (XIV)), efficacies of 63% and 75% are reported for compositions containing a binary combination of prothioconazole and fluoxastrobin, with *N-methyl-pyrrolidone* as solvent and alkyaryl polyglycol ether as emulsifier. (Dutzman, cols. 33 and 34; and cols. 39 and 40, Example 5 and Table 5.) In contrast, the Example and Table on pages 8 and 9 of the instant specification describes *Erysiphe graminis* f. sp. *tritici* test wherein the inoculated wheat plants are placed in a greenhouse at about 20 °C and the evaluation is carried out 8 *days* after the inoculation. At the mixing ratio of 1:1:1 (fluoxastrobin:prothioconazole:tebuconazole), an efficacy of 100% is observed for the claimed composition containing a ternary combination of fluoxastrobin, prothioconazole and tebuconazole, with *N,N-dimethylacetamide* as solvent and alkyaryl polyglycol ether as emulsifier. Thus, the Example 5 of Dutzmann is directed to *Erysiphe graminis* f. sp. *tritici* test under different test conditions (such as different solvent and different evaluation time after inoculation), as compared to the Example of the instant specification. Hence, the efficacies of 63% and 75% of the Example 5 of Dutzmann are not directly comparable to the efficacy of 100% of the present composition.

As discussed previously, the Example on pages 8 and 9 of the instant specification demonstrates that the claimed composition has an enhanced synergistic

effect against *Erysiphe graminis f. sp. Tritici* on wheat plants, as compared to at least some of the Dutzmann combinations using the same test conditions. Accordingly, the claimed composition is not obvious over Dutzmann.

Finally, the Examiner stated that:

Even, assuming, purely *arguendo*, that unexpected results had been shown, Applicant's claims encompass a broader range than that shown in the Table on p. 9 of the instant specification and Tables 1 and 2 of the declaration, therefore the examples are not commensurate in scope with the instant claims.

(Office Action, page 5.) Applicants respectfully disagree.

As discussed previously, Applicants have demonstrated synergistic results of presently claims compositions at different mixing ratios, in controlling different fungi. Such synergistic results at least commensurate in scope with present claims 9 and 10.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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